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FIG. 1a

FIG. 1	FIG. 1a FIG. 1b
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Sequence of the PCV Imp1011-48121 isolate (SEQ ID No. 1)

1 AATTCAACCT TAACCTTTCT TATTCTGTAG TATTCAAAGG GCACAGAGCG
51 GGGGTTTGAG CCCCCTCCTG GGGGAAGAAA GTCATTAATA TTGAATCTCA
101 TCATGTCCAC CGCCCAGGAG GCGGTTCTGA CTGTGGTTCG CTTGACAGTA
151 TATCCGAAGG TGCGGGAGAG GCGGGTGTG AAGATGCCAT TTTTCCTTCT
201 CCAGCGGTAA CGGTGGCGGG GGTGGACGAG CCAGGGGCGG CGGCGGAGGA
251 TCTGGCCAAG ATGGCTGCGG GGGCGGTGTC TTCTTCTCCG GTAACGCCTC
301 CTTGGATACG TCATATCTGA AAACGAAAGA AGTGCCTGT AAGTATTACC
351 AGCGCACTTC GGCAGCGGCA GCACCTCGGC AGCACCTCAG CAGCAACATG
401 CCGAGCAAGA AGAATGGAAG AAGCGGACCC CAACCCATA AAAGGTGGGT
451 GTTCACTCTG AATAATCCTT CCGAAGACGA GCGCAAGAAA ATACGGGATC
501 TTCCAATATC CCTATTTGAT TATTTTATTG TTGGCGAGGA GGGTAATGAG
551 GAAGGACGAA CACCTCACCT CCAGGGGTTC GCTAATTTTG TGAAGAAGCA
601 GACTTTTAAT AAAGTGAAGT GGTATTTGGG TGCCCGCTGC CACATCGAGA
651 AAGCGAAAGG AACAGATCAG CAGAATAAAG AATACTGCAG TAAAGAAGGC
701 AACTTACTGA TGGAGTGTGG AGCTCCTAGA TCTCAGGGAC AACGGAGTGA
751 CCTGTCTACT GCTGTGAGTA CCTTGTTGGA GAGCGGGAGT CTGGTGACCG
801 TTGCAGAGCA GCACCCTGTA ACGTTTGTCA GAAATTTCCT CGGGCTGGCT
851 GAACTTTTGA AAGTGAGCGG GAAAATGCAG AAGCGTGATT GGAAGACTAA
901 TGTacACGTC ATTGTGGGGC CACCTGGGTG TGGTAAAAGC AAATGGGCTG
951 CTAATTTTGC AGACCCGGAA ACCACATACT GGAAACCACC TAGAAACAAG
1001 TGGTGGGATG GTTACCATGG TGAAGAAGTG GTTGTATTG ATGACTTTTA
1051 TGGCTGGCTG CCCTGGGATG ATCTACTGAG ACTGTGTGAT CGATATCCAT
1101 TGACTGTAGA GACTAAAGGT GGAAGTGTAC CTTTTTTGGC CCGCAGTATT
1151 CTGATTACCA GCAATCAGAC CCCGTTGGAA TGGTACTCCT CAACTGCTGT
1201 CCCAGCTGTA GAAGCTCTTT ATCGGAGGAT TACTTCCTTG GTATTTTGGG

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FIG. 1b

FIG. 1	FIG. 1a
	FIG. 1b

1251 AGAATGCTAC AGAACAATCC ACGGAGGAAG GGGGCCAGTT CGTCACCCCTT
1301 TCCCCCCEAT GCCCTGAATT TCCATATGAA ATAAATTACT GAGTCTTTTTT
1351 TATCACTTCG TAATGGTTTT TATTATTCAT TAAGGGTTAA GTGGGGGGTC
1401 TTTAAGATTA AATTCTCTGA ATTGTACATA CATGGTTACA CGGATATTGT
1451 ATTCCTGGTC GTATATACTG TTTTCGAACG CAGTGCCGAG GCCTACGTGG
1501 TCTACATTTT CAGCAGTTTG TAGTCTCAGC CACAGCTGGT TTCTTTTGTT
1551 GTTTGGTTGG AAGTAATCAA TAGTGGAATC TAGGACAGGT TTGGGGGTAA
1601 AGTAGCGGGA GTGGTAGGAG AAGGGCTGGG TTATGGTATG GCGGGAGGAG
1651 TAGTTTACAT AGGGGTCATA GGTGAGGGCT GTGGCCTTTG TTACAAAGTT
1701 ATCATCTAGA ATAACAGCAC TGGAGCCCAC TCCCCTGTCA CCCTGGGTGA
1751 TCGGGGAGCA GGGCCAG

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FIG. 2a

FIG. 2	FIG. 2a
	FIG. 2b

Sequence of the PCV Imp1011-48285 isolate (SEQ ID No. 2)

1 AATTCAACCT TAACCTTTCT TATTCTGTAG TATTCAAAGG GCACAGAGCG
51 GGGGTTTGAG CCCCTCCTG GGGGAAGAAA GTCATTAATA TTGAATCTCA
101 TCATGTCCAC CGCCAGGAG GCGGTTTTGA CTGTGGTTCG CTTGACAGTA
151 TATCCGAAGG TCGGGGAGAG GCGGGTGTG AAGATGCCAT TTTTCCTTCT
201 CCAGCGGTAA CGGTGGCGGG GGTGGACGAG CCAGGGGCGG CGGCGGAGGA
251 TCTGGCCAAG ATGGCTGCGG GGGCGGTGTC TTCTTCTCCG GTAACGCCTC
301 CTTGGATACG TCATATCTGA AAACGAAAGA AGTGCCTGT AAGTATTACC
351 AGCGCACTTC GGCAGCGGCA GCACCTCGGC AGCACCTCAG CAGCAACATG
401 CCCAGCAAGA AGAATGGAAG AAGCGGACCC CAACCCATA AAAGGTGGGT
451 GTTCACTCTG AATAATCCTT CCGAAGACGA GCGCAAGAAA ATACGGGATC
501 TTCCAATATC CCTATTGAT TATTTTATTG TTGGCGAGGA GGGTAATGAG
551 GAAGGACGAA CACCTCACCT CCAGGGGTTT GCTAATTTTG TGAAGAAGCA
601 GACTTTTAAT AAAGTGAAGT GGTATTTGGG TGCCCGCTGC CACATCGAGA
651 AAGCGAAAGG AACAGATCAG CAGAATAAAG AATACTGCAG TAAAGAAGGC
701 AACTTACTGA TGGAGTGTGG AGCTCCTAGa TCTCagGGAC AACGGAGTGA
751 CCTGTCTACT GCTGTGAGTA CTTGTTGGA GAGCGGGAGT CTGGTGACCG
801 TTGCAGAGCA GCACCCTGTA ACGTTTGTCA GAAATTTCCG CGGGCTGGCT
851 GAACTTTTGA AAGTGAGCGG GAAAATGCAG AAGCGTGATT GGAAGACTAA
901 TGTACACGTC ATTGTGGGGC CACCTGGGTG TGGTAAAAGC AAATGGGCTG
951 CTAATTTTGC AGACCCGGAA ACCACATACT GGAAACCACC TAGAAACAAG
1001 TGGTGGGATG GTTACCATGG TGAAGAAGTG GTTGTTATTG ATGACTTTTA
1051 TGGCTGGCTG CCCTGGGATG ATCTACTGAG ACTGTGTGAT CGATATCCAT
1101 TGA CTGTAGTA GACTAAAGGT GGAAGTGTAC CTTTTTTGGC CCGCAGTATT
1151 CTGATTACCA GCAATCAGAC CCCGTTGGAA TGGTACTCCT CAACTGCTGT
1201 CCCAGCTGTA GAAGCTCTTT ATCGGAGGAT TACTTCCTTG GTATTTTGA

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FIG. 2b

FIG. 2	FIG. 2a
	FIG. 2b

1251 AGAATGCTAC AGAACAATCC ACGGAGGAAG GGGGCCAGTT CGTCACCCTT
1301 TCCCCCCCAT GCCCTGAATT TCCATATGAA ATAAATTACT GAGTCTTTTT
1351 TATCACTTCG TAATGGTTTT TATTATTCAT TAAGGGTTAA GTGGGGGGTC
1401 TTAAAGATTA AATTCTCTGA ATTGTACATA CATGGTTACA CGGATATTGT
1451 ATTCCTGGTC GTATATACTG TTTTCGAACG CAGTGCCGAG GCCTACGTGG
1501 TCTACATTTT CAGTAGTTTG TAGTCTCAGC CACAGCTGAT TTCTTTTGT
1551 GTTTGGTTGG AAGTAATCAA TAGTGGAATC TAGGACAGGT TTGGGGGTAA
1601 AGTAGCGGGA GTGGTAGGAG AAGGGCTGGG TTATGGTATG GCGGGA_gGAG
1651 TAGTTTACAT AGGGGTCATA GGTGA_gGGCT GTGGCCTTTG TTACAAAGTT
1701 ATCATCTAGA ATAACAGCAC TGGAGCCCAC TCCCCTGTCA CCCTGGGTGA
1751 TCGGGGAGCA GGGCCAG

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FIG. 3a

FIG. 3	FIG. 3a
	FIG. 3b

Sequence of the PCV Imp999 isolate (SEQ ID No. 3)

1 AATTCAACCT TAACCTTTTT TATTCTGTAG TATTCAAAGG GTATAGAGAT
51 TTTGTTGGTC CCCCTCCCG GGGGAACAAA GTCGTCAATA TTAAATCTCA
101 TCATGTCCAC CGCCCAGGAG GCGGTTCTGA CTGTGGTAGC CTTGACAGTA
151 TATCCGAAGG TGCGGGAGAG GCGGGTGTG AAGATGCCAT TTTCTTTCT
201 CCAACGGTAG CCGTGGCGGG GGTGGACGAG CCAGGGGCGG CGGCGGAGGA
251 TCTGGCCAAG ATGGCTGCGG GGGCGGTGTC TTCTTCTGCG GTAACGCCTC
301 CTTGGATACG TCATAGCTGA AAACGAAAGA AGTGCGCTGT AAGTATTACC
351 AGCGCACTTC GGCAGCGGCA GCACCTCGGC AGCACCTCAG CAGCAACATG
401 CCCAGCAAGA AGAATGGAAG AAGCGGACCC CAACCACATA AAAGGTGGGT
451 GTTCACGCTG AATAATCCTT CCGAAGACGA GCGCAAGAAA ATACGGGAGC
501 TCCCAATCTC CCTATTTGAT TATTTTATTG TTGGCGAGGA GGGTAATGAG
551 GAAGGACGAA CACCTCACCT CCAGGGGTTT GCTAATTTTG TGAAGAAGCA
601 AACTTTTAAT AAAGTGAAGT GGTATTTGGG TGCCCGCTGC CACATCGAGA
651 AAGCCAAAGG AACTGATCAG CAGAATAAAG AATATTGCAG TAAAGAAGGC
701 AACTTACTTA TTGAATGTGG AGCTCCTCGA TCTCAAGGAC AACGGAGTGA
751 CCTGTCTACT GCTGTGAGTA CTTGTTGGA GAGCGGGAGT CTGGTGACCG
801 TTGCAGAGCA GCACCCTGTA ACGTTTGTC GAAATTTCCG CGGGCTGGCT
851 GAACTTTTGA AAGTGAGCGG GAAATGTCAG AAGCGTGATT GGAAGACCAA
901 TGTACACGTC ATTGTGGGGC CACCTGGGTG TGGTAAAAGC AAATGGGCTG
951 CTAATTTTGC AGACCCGGA ACCACATACT GGAAACCACC TAGAAACAAG
1001 TGGTGGGATG GTTACCATGG TGAAGAAAGT GTTGTATTG ATGACTTTTA
1051 TGGCTGGCTG CCGTGGGATG ATCTACTGAG ACTGTGTGAT CGATATCCAT
1101 TGA CTGTAGTA GACTAAAGGT GGAAGTGTAC CTTTTTTGGC CCGCAGTATT
1151 CTGATTACCA GCAATCAGAC CCCGTTGGAA TGGTACTCCT CAACTGCTGT
1201 CCCAGCTGTA GAAGCTCTCT ATCGGAGGAT TACTTCCTTG GTATTTTGA

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FIG. 3b

FIG. 3	FIG. 3a
	FIG. 3b

1251 AGAATGCTAC AGAACAATCC ACGGAGGAAG GGGGCCAGTT CGTCACCCCTT
1301 TCCCCCCCAT GCCCTGAATT TCCATATGAA ATAAATTACT GAGTCTTTTT
1351 TATCACTTCG TAATGGTTTT TATTATTCAT TTAGGGTTTA AGTGGGGGGT
1401 CTTTAAGATT AAATTCTCTG AATTGTACAT ACATGGTTAC ACGGATATTG
1451 TAGTCCTGGT CGTATATACT GTTTTCGAAC GCAGTGCCGA GGCCTACGTG
1501 GTCCACATTT CTAGAGGTTT GTAGCCTCAG CCAAAGCTGA TTCCTTTTGT
1551 TATTTGGTTG GAAGTAATCA ATAGTGGAGT CAAGAACAGG TTTGGGTGTG
1601 AAGTAACGGG AGTGGTAGGA GAAGGGTTGG GGGATTGTAT GGCGGGAGGA
1651 GTAGTTTACA TATGGGTCAT AGGTTAGGGC TGTGGCCTTT GTTACAAAGT
1701 TATCATCTAG AATAACAGCA GTGGAGCCCA CTCCCCTATC ACCCTGGGTG
1751 ATGGGGGAGC AGGGCCAG

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FIG. 4a

FIG. 4	FIG. 4a FIG. 4b
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Sequence of the PCV Impl010 isolate (SEQ ID No. 4)

1 AATTCAACCT TAACCTTTCT TATTCTGTAG TATTCAAAGG GTATAGAGAT
51 TTTGTTGGTC CCCCCTCCCG GGGGAACAAA GTCGTCAATT TTAAATCTCA
101 TCATGTCCAC CGCCCAGGAG GCGGTTGTGA CTGTGGTACG CTGACAGTA
151 TATCCGAAGG TGCGGGAGAG GCGGGTGTG AAGATGCCAT TTTTCCTTCT
201 CCAACGGTAG CGGTGGCGGG GGTGGACGAG CCAGGGGCGG CGGCGGAGGA
251 TCTGGCCAAG ATGGCTGCGG GGGCGGTGTC TTCTTCTGCG GTAACGCCTC
301 CTTGGATACG TCATAGCTGA AAACGAAAGA AGTGCCTGT AAGTATTACC
351 AGCGCACTTC GGCAGCGGCA GCACCTCGGC AGCACCTCAG CAGCAACATG
401 CCCAGCAAGA AGAATGGAAG AAGCGGACCC CAACCACATA AAAGGTGGGT
451 GTTCACGCTG AATAATCCTT CCGAAGACGA GCGCAAGAAA ATACGGGAGC
501 TCCAATCTC CCTATTTGAT TATTTTATTG TTGGCGAGGA GGGTAATGAG
551 GAAGGACGAA CACCTCACCT CCAGGGGTTT GCTAATTTTG TGAAGAAGCA
601 AACTTTTAAT AAAGTGAAGT GGTATTTGGG TGCCCGCTGC CACATCGAGA
651 AAGCCAAAGG AACTGATCAG CAGAATAAAG AATATTGCAG TAAAGAAGGC
701 AACTTACTTA TTGAATGTGG AGCTCCTCGA TCTCAAGGAC AACGGAGTGA
751 CCTGTCTACT GCTGTGAGTA CCTTGTGGA GAGCGGGAGT CTGGTGACCG
801 TTGCAGAGCA GCACCCTGTA ACGTTTGTCA GAAATTTCCG CGGGCTGGCT
851 GAACTTTTGA AAGTGAGCGG GAAAATGCAG AAGCGTGATT GGAAGACCAA
901 TGTACACGTC ATTGTGGGGC CACCTGGGTG TGGTAAAAGC AAATGGGCTG
951 CTAATTTTGC AGACCCGGAA ACCACATACT GGAAACCACC TAGAAACAAG
1001 TGGTGGGATG GTTACCATGG TGAAGAAGTG GTTGTATTG ATGACTTTTA
1051 TGGCTGGCTG CCGTGGGATG ATCTACTGAG ACTGTGTGAT CGATATCCAT
1101 TGA CTGTG TAGA GACTAAAGGT GGAAGTGTAC CTTTTTGGC CCGCAGTATT
1151 CTGATTACCA GCAATCAGAC CCCGTTGGAA TGGTACTCCT CAACTGCTGT
1201 CCCAGCTGTA GAAGCTCTCT ATCGGAGGAT TACTTCCTTG GTATTTTGA

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FIG. 4b

FIG. 4	FIG. 4a
	FIG. 4b

1251 AGAATGCTAC AGAACAATCC ACGGAGGAAG GGGGCCAGTT CGTCACCCTT
1301 TCCCCCCCAT GCCCTGAATT TCCATATGAA ATAAATTACT GAGTCTTTTT
1351 TATCACTTCG TAATGGTTTT TATTATTCAT TTAGGGTTTA AGTGGGGGGT
1401 CTTTAAGATT AAATTCTCTG AATTGTACAT ACATGGTTAC ACGGATATTG
1451 TAGTCCTGGT CGTATTTACT GTTTTCGAAC GCAGCGCCGA GGCCTACGTG
1501 GTCCACATTT CCAGAGGTTT GTAGTCTCAG CCAAAGCTGA TTCCTTTTGT
1551 TATTTGGTTG GAAGTAATCA ATAGTGGAGT CAAGAACAGG TTTGGGTGTG
1601 AAGTAACGGG AGTGGTAGGA GAAGGGTTGG GGGATTGTAT GCGGGGAGGA
1651 GTAGTTTACA TATGGGTCAT AGGTTAGGGC TGTGGCCTTT GTTACAAAGT
1701 TATCATCTAG AATAACAGCA GTGGAGCCCA CTCCCCTATC ACCCTGGGTG
1751 ATGGGGGAGC AGGGCCAG

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FIG. 5a

FIG. 5	FIG. 5a
	FIG. 5b
	FIG. 5c
	FIG. 5d

CLUSTAL W multiple sequence alignment

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PCVPK-15      AATTCATATTTAGCCTTTCTAATACGGTAGTATTGGAAAGGTAGGGGTAGGGGGTTGGTG
IMP999-ECO    AATTCAACCTTAACCTTTTTTATTCTGTAGTATTCAAAGGGTATAGAGATTTTGTGGTC
IMP1010-ST    AATTCAACCTTAACCTTTCTTATTCTGTAGTATTCAAAGGGTATAGAGATTTTGTGGTC
IMP1011-48    AATTCAACCTTAACCTTTCTTATTCTGTAGTATTCAAAGGGCACAGAGCGGGGGTTTGAG
IMP1011-48    AATTCAACCTTAACCTTTCTTATTCTGTAGTATTCAAAGGGCACAGAGCGGGGGTTTGAG
*****      *** ***** * * * * ***** * * * * *      **** *

PCVPK-15      CCGCCTGAGGGGGGGAGGAACTGGCCGATGTTGAATTTGAGGTAGTTAACATTCCAAGAT
IMP999-ECO    CCCCCTCCCGGGGGAACAAAGTCGTCAATTTAAATCTCATCATGTCCACCGCCCAGGAG
IMP1010-ST    CCCCCTCCCGGGGGAACAAAGTCGTCAATTTAAATCTCATCATGTCCACCGCCCAGGAG
IMP1011-48    CCCCCTCCTGGGGGAAGAAAGTCATTAATATTGAATCTCATCATGTCCACCGCCCAGGAG
IMP1011-48    CCCCCTCCTGGGGGAAGAAAGTCATTAATATTGAATCTCATCATGTCCACCGCCCAGGAG
* * * * *      ***** * * * * *      * * * * * * * * * *      * * * * *

PCVPK-15      GGC--TGCGAGTATCCTCCTTTT-ATGGTGAGTACAAATTCTGTAGAAAGCGGGAATTG
IMP999-ECO    GGCGTTCTGACTGTGGTAGCCTTGACAGTATATCCGAAGGTGCGGGAGAGGCGGGTGTG
IMP1010-ST    GGCGTTGTGACTGTGGTACGCTTGACAGTATATCCGAAGGTGCGGGAGAGGCGGGTGTG
IMP1011-48    GGCGTTCTGACTGTGGTTCGCTTGACAGTATATCCGAAGGTGCGGGAGAGGCGGGTGTG
IMP1011-48    GGCGTTTGTACTGTGGTTCGCTTGACAGTATATCCGAAGGTGCGGGAGAGGCGGGTGTG
*** * * * *      * * * * *      * * * * *      * * * * *      * * * * *

PCVPK-15      AAGATACCCGCTCTTTTCGGCGCCATCTGTAACGGTTTCTGAAGCGGGGTGTGCCAAATAT
IMP999-ECO    AAGATGCCATTTTTCTTTCTCCAACGGTAGCGGTGGC-GGGGGTGGG-CGAGCCAGGGGC
IMP1010-ST    AAGATGCCATTTTTCTTTCTCCAACGGTAGCGGTGGC-GGGGGTGGG-CGAGCCAGGGGC
IMP1011-48    AAGATGCCATTTTTCTTTCTCCAACGGTAGCGGTGGC-GGGGGTGGG-CGAGCCAGGGGC
IMP1011-48    AAGATGCCATTTTTCTTTCTCCAACGGTAGCGGTGGC-GGGGGTGGG-CGAGCCAGGGGC
***** * * * *      * * * * *      * * * * *      * * * * *      * * * * *

PCVPK-15      GGTCTTCTCCGAGGATGTTTCCAAGATGGCTGCGGGGGCGGGTCTTCTTCTGCGGTAA
IMP999-ECO    GG---CGGCGGAGGATCTGGCCAAGATGGCTGCGGGGGCGGTGTCTTCTTCTGCGGTAA
IMP1010-ST    GG---CGGCGGAGGATCTGGCCAAGATGGCTGCGGGGGCGGTGTCTTCTTCTGCGGTAA
IMP1011-48    GG---CGGCGGAGGATCTGGCCAAGATGGCTGCGGGGGCGGTGTCTTCTTCTGCGGTAA
IMP1011-48    GG---CGGCGGAGGATCTGGCCAAGATGGCTGCGGGGGCGGTGTCTTCTTCTGCGGTAA
* *      * * ***** * ***** ***** ***** *****

PCVPK-15      CGCCTCCTTGGCCACGTCATCCTATAAAAGTGAAAGAAGTGCGCTGCTGTAGTATTACCA
IMP999-ECO    CGCCTCCTTGGGATACGTCATAGC-TGAAAACGAAAGAAGTGCGCTGTA--AGTATTACCA
IMP1010-ST    CGCCTCCTTGGATACGTCATAGC-TGAAAACGAAAGAAGTGCGCTGTA--AGTATTACCA
IMP1011-48    CGCCTCCTTGGGATACGTCATATC-TGAAAACGAAAGAAGTGCGCTGTA--AGTATTACCA
IMP1011-48    CGCCTCCTTGGGATACGTCATATC-TGAAAACGAAAGAAGTGCGCTGTA--AGTATTACCA
***** * * * *      * * * * *      * * * * *      * * * * *      * * * * *

PCVPK-15      GCGCACTTCGGCAGCGGCAGCACCTCGGCAGCG--TCAGTG--AAAATGCCAAGCAAGAA
IMP999-ECO    GCGCACTTCGGCAGCGGCAGCACCTCGGCAGCACCTCAGCAGCAACATGCCAGCAAGAA
IMP1010-ST    GCGCACTTCGGCAGCGGCAGCACCTCGGCAGCACCTCAGCAGCAACATGCCAGCAAGAA
IMP1011-48    GCGCACTTCGGCAGCGGCAGCACCTCGGCAGCACCTCAGCAGCAACATGCCAGCAAGAA
IMP1011-48    GCGCACTTCGGCAGCGGCAGCACCTCGGCAGCACCTCAGCAGCAACATGCCAGCAAGAA
***** * * * *      * * * * *      * * * * *      * * * * *

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FIG. 5c

FIG. 5	FIG. 5a
	FIG. 5b
	FIG. 5c
	FIG. 5d

PCVPK-15
IMP999-ECO
IMP1010-ST
IMP1011-48
IMP1011-48

GAAGACAGCTGTACACGTCATAGTGGGCCCCGGTGTGGGAAGAGCCAGTGGGCCCC
GAAGACCAATGTACACGTCATTGTGGGGCCACCTGGGTGTGGTAAAAGCAAATGGGCTGC
GAAGACCAATGTACACGTCATTGTGGGGCCACCTGGGTGTGGTAAAAGCAAATGGGCTGC
GAAGACTAATGTACACGTCATTGTGGGGCCACCTGGGTGTGGTAAAAGCAAATGGGCTGC
GAAGACTAATGTACACGTCATTGTGGGGCCACCTGGGTGTGGTAAAAGCAAATGGGCTGC

PCVPK-15
IMP999-ECO
IMP1010-ST
IMP1011-48
IMP1011-48

TAATTTTGTCTGAGCCTAGGGACACCTACTGGAAGCCTAGTAGAAATAAGTGGTGGGATGG
TAATTTTGCAGACCCGGAACCACATACTGGAACCACCTAGAAACAAGTGGTGGGATGG
TAATTTTGCAGACCCGGAACCACATACTGGAACCACCTAGAAACAAGTGGTGGGATGG
TAATTTTGCAGACCCGGAACCACATACTGGAACCACCTAGAAACAAGTGGTGGGATGG
TAATTTTGCAGACCCGGAACCACATACTGGAACCACCTAGAAACAAGTGGTGGGATGG

PCVPK-15
IMP999-ECO
IMP1010-ST
IMP1011-48
IMP1011-48

ATATCATGGAGAAGAAGTTGTTGTTTGGATGATTTTTATGGCTGGTTACCTTGGGATGA
TTACCATGGTGAAGAAGTGGTTGTTATTGATGACTTTTTATGGCTGGCTGCCGTGGGATGA
TTACCATGGTGAAGAAGTGGTTGTTATTGATGACTTTTTATGGCTGGCTGCCGTGGGATGA
TTACCATGGTGAAGAAGTGGTTGTTATTGATGACTTTTTATGGCTGGCTGCCGTGGGATGA
TTACCATGGTGAAGAAGTGGTTGTTATTGATGACTTTTTATGGCTGGCTGCCGTGGGATGA

PCVPK-15
IMP999-ECO
IMP1010-ST
IMP1011-48
IMP1011-48

TCTACTGAGACTGTGTGACCCGATATCCATTGACTGTAGAGACTAAAGGGGTTACTGTTCC
TCTACTGAGACTGTGTGATCGATATCCATTGACTGTAGAGACTAAAGGTGGAAGTGTACC
TCTACTGAGACTGTGTGATCGATATCCATTGACTGTAGAGACTAAAGGTGGAAGTGTACC
TCTACTGAGACTGTGTGATCGATATCCATTGACTGTAGAGACTAAAGGTGGAAGTGTACC
TCTACTGAGACTGTGTGATCGATATCCATTGACTGTAGAGACTAAAGGTGGAAGTGTACC

PCVPK-15
IMP999-ECO
IMP1010-ST
IMP1011-48
IMP1011-48

TTTTTTGGCCCCGAGTATTTGATTACCAGCAATCAGGCCCCCAGGAATGGTACTCCTC
TTTTTTGGCCCCGAGTATTTCTGATTACCAGCAATCAGACCCCGTTGGAATGGTACTCCTC
TTTTTTGGCCCCGAGTATTTCTGATTACCAGCAATCAGACCCCGTTGGAATGGTACTCCTC
TTTTTTGGCCCCGAGTATTTCTGATTACCAGCAATCAGACCCCGTTGGAATGGTACTCCTC
TTTTTTGGCCCCGAGTATTTCTGATTACCAGCAATCAGACCCCGTTGGAATGGTACTCCTC

PCVPK-15
IMP999-ECO
IMP1010-ST
IMP1011-48
IMP1011-48

AACTGCTGTCCCAGCTGTAGAAGCTCTCTATCGGAGGATTACTACTTTGCAATTTTGGAA
AACTGCTGTCCCAGCTGTAGAAGCTCTCTATCGGAGGATTACTTCTTGGTATTTTGGAA
AACTGCTGTCCCAGCTGTAGAAGCTCTCTATCGGAGGATTACTTCTTGGTATTTTGGAA
AACTGCTGTCCCAGCTGTAGAAGCTCTTTATCGGAGGATTACTTCTTGGTATTTTGGAA
AACTGCTGTCCCAGCTGTAGAAGCTCTTTATCGGAGGATTACTTCTTGGTATTTTGGAA

PCVPK-15
IMP999-ECO
IMP1010-ST
IMP1011-48
IMP1011-48

GACTGCTGGAGAACAATCCACGGAGGTACCCGAAGGCCGATTTGAAGCAGTGGACCCACC
GAATGCTACAGAACAATCCACGGAGGAA---GGGGGCCAGTTCGTCAACCTTTCCCCCCC
GAATGCTACAGAACAATCCACGGAGGAA---GGGGGCCAGTTCGTCAACCTTTCCCCCCC
GAATGCTACAGAACAATCCACGGAGGAA---GGGGGCCAGTTCGTCAACCTTTCCCCCCC
GAATGCTACAGAACAATCCACGGAGGAA---GGGGGCCAGTTCGTCAACCTTTCCCCCCC

PCVPK-15
IMP999-ECO
IMP1010-ST
IMP1011-48
IMP1011-48

CTGTGCCCTTTTCCCATATAAAATAAATTACTGAGTCTTTTTTGTATCACATCGTAATG
ATGCCCTGAATTTCCATATGAAATAAATTACTGAGTCTTTTT---TATCACTTCGTAATG
ATGCCCTGAATTTCCATATGAAATAAATTACTGAGTCTTTTT---TATCACTTCGTAATG
ATGCCCTGAATTTCCATATGAAATAAATTACTGAGTCTTTTT---TATCACTTCGTAATG
ATGCCCTGAATTTCCATATGAAATAAATTACTGAGTCTTTTT---TATCACTTCGTAATG

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FIG. 5d

FIG. 5	FIG. 5a
	FIG. 5b
	FIG. 5c
	FIG. 5d

PCVPK-15	GTTTTTATT-TTTATTTA---TTTA---GAGGGTCTTTTAGGATAAAATTCCTCTGAATTG
IMP999-ECO	GTTTTTATTATTCAATTAGGGTTTAAGTGGGGGGTCTTTAAGATTAAATTCCTCTGAATTG
IMP1010-ST	GTTTTTATTATTCAATTAGGGTTTAAGTGGGGGGTCTTTAAGATTAAATTCCTCTGAATTG
IMP1011-48	GTTTTTATTATTCAATAAGGGTT-AAGTGGGGGGTCTTTAAGATTAAATTCCTCTGAATTG
IMP1011-48	GTTTTTATTATTCAATAAGGGTT-AAGTGGGGGGTCTTTAAGATTAAATTCCTCTGAATTG
	***** *
PCVPK-15	TACATAAATAGTCAGCCTTACCACATAATTTTGGGCTGTGGCTGC-ATTTTGGAGCGCAT
IMP999-ECO	TACATACATGGTTACACGGATATTGTAGTCCTGG-TCGTATATACTGTTTTCGAACGCAG
IMP1010-ST	TACATACATGGTTACACGGATATTGTAGTCCTGG-TCGTATTTACTGTTTTCGAACGCAG
IMP1011-48	TACATACATGGTTACACGGATATTGTATTCTCTGG-TCGTATATACTGTTTTCGAACGCAG
IMP1011-48	TACATACATGGTTACACGGATATTGTATTCTCTGG-TCGTATATACTGTTTTCGAACGCAG
	***** *
PCVPK-15	AGCCGAGGCCTGTGTGCTCGACATTGGTGTGGGTATTTAAATGGAGCCACAGCTGGTTTC
IMP999-ECO	TGCCGAGGCCTACGTGGTCCACATTTCTAGAGGTTTGTAGCCTCAGCCAAAGCTGATTCC
IMP1010-ST	CGCCGAGGCCTACGTGGTCCACATTTCCAGAGGTTTGTAGTCTCAGCCAAAGCTGATTCC
IMP1011-48	TGCCGAGGCCTACGTGGTCTACATTTCCAGCAGTTGTAGTCTCAGCCACAGCTGGTTTC
IMP1011-48	TGCCGAGGCCTACGTGGTCTACATTTCCAGTAGTTGTAGTCTCAGCCACAGCTGATTTC
	***** *
PCVPK-15	TTTTATTATTGGGTGGAACCAATCAATTGTTTGGTCCAGCTCAGGTTTGGGGGTGAAGT
IMP999-ECO	TTTTGTTATTGGTTGGAAGTAATCAATAGTGGAGTCAAGAACAGGTTTGGGTGTGAAGT
IMP1010-ST	TTTTGTTATTGGTTGGAAGTAATCAATAGTGGAGTCAAGAACAGGTTTGGGTGTGAAGT
IMP1011-48	TTTTGTTGTTGGTTGGAAGTAATCAATAGTGGAAATCTAGGACAGGTTTGGGGGTAAAGT
IMP1011-48	TTTTGTTGTTGGTTGGAAGTAATCAATAGTGGAAATCTAGGACAGGTTTGGGGGTAAAGT
	**** *
PCVPK-15	ACCTGGAGTGGTAGGTAAAGGGCTGCCTTATGGTGTGGCGGGAGGAGTAGTTAATATAGG
IMP999-ECO	AACGGGAGTGGTAGGAGAAGGGTTGGGGGATTGTATGGCGGGAGGAGTAGTTTACATATG
IMP1010-ST	AACGGGAGTGGTAGGAGAAGGGTTGGGGGATTGTATGGCGGGAGGAGTAGTTTACATATG
IMP1011-48	AGCGGGAGTGGTAGGAGAAGGGCTGGGTTATGGTATGGCGGGAGGAGTAGTTTACATAGG
IMP1011-48	AGCGGGAGTGGTAGGAGAAGGGCTGGGTTATGGTATGGCGGGAGGAGTAGTTTACATAGG
	* *
PCVPK-15	GGTCATAGGCCAAGTTGGTGGAGGGGGTTACAAAGTTGGCATCCAAGATAACAACAGTGG
IMP999-ECO	GGTCATAGGTTAGGGCTGTGGCCTTTGTTACAAAGTTATCATCTAGAATAACAGCAGTGG
IMP1010-ST	GGTCATAGGTTAGGGCTGTGGCCTTTGTTACAAAGTTATCATCTAGAATAACAGCAGTGG
IMP1011-48	GGTCATAGGTGAGGGCTGTGGCCTTTGTTACAAAGTTATCATCTAGAATAACAGCACTGG
IMP1011-48	GGTCATAGGTGAGGGCTGTGGCCTTTGTTACAAAGTTATCATCTAGAATAACAGCACTGG
	***** *
PCVPK-15	ACCCAACACCTCTTTGATTAGAGGTGATGGGGTCTCTGGGGTAA
IMP999-ECO	AGCCCACTCCCCTATCACCCCTGGGTGATGGGGGAGCAGGGCCAG
IMP1010-ST	AGCCCACTCCCCTATCACCCCTGGGTGATGGGGGAGCAGGGCCAG
IMP1011-48	AGCCCACTCCCCTGTCAACCCTGGGTGATCGGGGAGCAGGGCCAG
IMP1011-48	AGCCCACTCCCCTGTCAACCCTGGGTGATCGGGGAGCAGGGCCAG
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